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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
08/833,620	04/07/97	DOBBINS	M 15275/8610(D)

EXAMINER

IM62/0131

MICHAEL L GOLDMAN
NIXON PEABODY LLP
CLINTON SQUARE, P.O. BOX 1051
ROCHESTER NY 14603

HOFFMANN, T

ART UNIT

PAPER NUMBER

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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☒ Responsive to communication(s) filed on 1-10-0
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1, 4-7, 10-13, 16-17, 20-23, 26-27, 30 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 12-13, 16, 22 is/are allowed.
- ☒ Claim(s) 1, 4-7, 10-11, 17, 20, 21, 23, 26-27 & 30 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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DETAILED ACTION

Continued Prosecution Application

The request filed on 10 January 2000 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/833,620 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 11, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter US 3823995 in view of Kratel GB 2049641.

To one of ordinary skill, Carpenter teaches discloses the claimed invention: see the paragraph spanning cols 7-8. However Carpenter does not teach the claimed siloxane. Ti is a IVB metal. Kratel teaches a method of making silica which is "suitable for all applications..." (page 3, lines 14-16); hexamethyldisiloxane is used as the silicon containing compound. A reading

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of col, 1, liens 15-20 in conjunction with the rest of Kratel teaches the notion that it is "often advantageous" to use the other compounds - rather than the carpenter carbon tetrachloride.

It would have been obvious to substitute the Carpenter reactant (hexamethyldisiloxane) with the Kratel reactant because it is there mere substitution for one known reactant for another one that is "often advantageous." '145 is cited to indicate that there is a reasonable expectation of success - it is clear that one can create cylindrical bodies like the type used to make optical fibers.

Claims 11, 17, and 21 are clearly met.

Claims 1, 23, 26-27, 30 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's supplied translation of Kawaguchi JP 138145 (hereinafter referred to as '145) in view of Schwarz EP 38900.

'145 discloses the invention as claimed except that '145 does not mention a cyclosiloxane (Applicant essentially admits to this in the Declaration). However' '145 teaches using "a siloxane such as hexamethyldisiloxane..." Schwarz discloses that the instantly claimed cyclosiloxane can be used instead of the disiloxane of '145 to make silica soot. It would have been obvious to use any known siloxane that meets the '145 requirements listed at page 6, lines 20-24. Schwarz teaches the claimed cyclosiloxane is known - it would have been prima facie obvious to use a known siloxane in the '145 invention because '145 clearly teaches to use a subset of all siloxanes.

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Claims 4, 27 and 30 are clearly met.

As to claims 5-6, '145 mentions on page 6 that a mix of the silane gas and oxygen is used. It is not stated if other gases are used. the examples of Schwarz uses an oxygen containing gas - air. It would have been obvious to use air as the source for the '145 oxygen because it is the cheapest source of oxygen. It is noted that air has the claimed inert gas - nitrogen.

Claims 7, 10, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of Carpenter, '145 and Schwarz.

Referring as to how the references are applied above, this combination is used to address the use of the cyclo-siloxane in the making of a fiber of claims 9-10 and 19-20. Carpenter teaches everything except the particular siloxane -rather silicon tetrachloride is used. '145 teaches that a particular group of siloxanes can be used instead of silicon tetrachloride when making high-purity silica optical glass bodies; a group that is open to the claimed cyclo-siloxane. But '145 makes no mention of any cyclo-siloxane. Schwarz teaches that the claimed cyclo-siloxane can be used in place of the specific hexamethyldisiloxane in making silica soot. It would have been prima facie obvious to use the Schwarz precursor in the Carpenter invention because such is the mere substitution of one known silica precursor for another known silica precursor.

Allowable Subject Matter

Claims 12-13, 16 and 22 are allowed.

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Response to Arguments

Applicant's arguments filed 29 November 1999 have been fully considered but they are not persuasive. .

It is argued that there is no expectation that the technique of Schwarz would be useful in conjunction for making a consolidated glass item. The Office disagrees. One of ordinary skill would recognize various silica making procedures are easily interchangeable.

It is also argued that researchers would not have expected the cyclo compounds to work to make a high purity glass because of carbon atoms being present in the body. First, it is deemed that researchers have skills which are above and beyond those of "a person having ordinary skill" as spelled out in 35 USC 103. The substitution of one known silica forming compound for another in a process would generally require only a bachelor's degree in a chemistry or ceramic/glass field. Second Applicant points to Kratel to support the position that carbon impurities exist; Kratel clearly points two different methods to overcome this problem - it is an easily jumped hurdle. (Page 1, lines 25-28 and 105-112).

It is further argued that Schwarz alone could not be used to reject the claims. This might be true, but unimportant since no such rejection is made.

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It is further argued that the prima facie showing of obviousness based on the combination of Schwarz and Kawaguchi is overcome by a showing of unexpected results. First, no nexus between the claimed invention and the embodiment of the showing; the claims are far broader than the single compound shown. Second, a showing of unexpected results is not an automatic knock-down of a prima facie showing; the weight of the unexpected results needs to be compared to the prima facie holding - In this case, a mere substitution of one known working compound for another is such a fundamentally obvious modification that it seems that the unexpected results are not significant enough - especially when one recognizes that there is just a handful of known workable silicon-containing compounds. Third, there is no showing that the results Applicant obtained were "unexpected" - there is only an allegation that the improvement was unexpected. For example, it could just be that each compound has its own optimal flame temperature and Applicant's test were based on a non-optimal flame temperature for the halide compound. As pointed out in MPEP 716.02, "Any differences between the claimed invention and the prior art may be expected to result in some differences in properties. The issue is whether the properties differ to such an extent that the difference is really unexpected." It is reasonable to expect different deposition rates. Lastly, it is noted that the left half of the graph pertains to efficiencies of in the 15-50% range; would one of ordinary skill be concerned with such low rates? Probably not. Instead the graph seems to show the two compounds have nearly the same maximum deposition rate (in the 50-60% range). One should ignore the arbitrary straight lines and focus on the maximum points of each compound.

Requests for interviews

The Office initiates interviews whenever it is deemed that it would be beneficial to do so to advance prosecution. And when an Applicant wishes to have an interview, the burden to initiate the interview remains solely with Applicant. MPEP 408 notes that Examiners are not required to note or acknowledge requests for telephone calls or state reasons why such proposed telephone interview would not be effective; therefore, requests for the Office to initiate interviews will not be acknowledge.

MPEP 713.05, 713.03, 713.09, and 713.01 and common sense indicate that any of the following questions would be appropriate for the Office to ask prior to granting an interview: Has there already been an interview of record in the case? Will the interview last more than 30 minutes? When do you want the interview? Does Applicant's representative have Power of Attorney? Does Applicant's representative have authority to bind the principal concerned? (i.e. Does Applicant's representative have authority to make any and all changes?) Who will participate in the interview? What is the intended purpose(s) of the interview? What is the intended content of the requested interview? Failure to volunteer the above information might possibly result in a denial of an interview, or the inability of the Examiner to adequately answer Applicant's questions during the interview.

CONTACT INFORMATION

Examiner's number	(703) 308-0469
fax- official papers after a final rejection	305-3599
fax- official papers (all others)	305-7718
fax- unofficial papers	305-7115
Group Receptionist	308-0651


JOHN HOFFMANN
PRIMARY EXAMINER

1-28-0